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# Increasing Organic Disease

## The New Public Health Problem

Address delivered before  
The American Public Health Association  
Rochester, N. Y.,  
September 9, 1915

By E. E. Rittenhouse, President  
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# INCREASING ORGANIC DISEASE

## The New Public Health Problem.

Address of E. E. Rittenhouse, President of the Life Extension Institute, Inc., at the meeting of the American Public Health Association, Rochester, New York, Sept. 9th, 1915.

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What we have to say here upon this subject of increasing organic disease will be of service to humanity only to the extent to which it encourages corrective action.

With this thought in mind let us take the shortest and simplest road to some of the important facts and fundamentals underlying this problem. Let us briefly consider the magnitude and significance of this heavy drain upon national vitality and the means of checking it.

### MAGNITUDE OF THE LOSS.

Since the great war commenced a year ago, America has spent 80 million dollars to succor Belgium—a glorious charity. During the same year over 400,000 American adults died from the preventable or deferable diseases of the heart, arteries and kidneys, including apoplexy—an inglorious sacrifice to ignorance and neglect.

Virtually all of these annual deaths are premature, as we well know, for they can be deferred by a proper observance of the fundamental laws of individual hygiene, and by adopting the habit of calling occasionally upon medical science for physical inspections for the purpose of detecting trouble in its incipency, or when it will still respond to corrective measures.

During the past hundred years it is estimated that the average length of life has been increased fifteen years and it is prophesied that another fifteen years will be added during the coming century. But let us suppose that the average age at death of those who die every year from organic disease could be increased by but one year in each case, which is quite possible with the preventive knowledge and experience which we now

have. A saving would result of 400,000 years of mature adult life annually. The social and economic value of such a saving is beyond human computation.

There are constantly at least 15,000,000 adults in America who have one or more of these organic diseases in some stage of development.

The period of development from the incipient to the serious stage of non-acute diseases may range from weeks to years, during which time they may be detected by occasional physical examinations and checked or cured if given proper attention. The most of these 15,000,000 people are drifting into these slowly developing and deferable organic diseases unknowingly. The State neither informs them nor warns them. It is not interested in them.

And there is the question of human suffering and economic waste.

It is impossible for us to visualize the millions who are through ignorance or neglect drifting into organic disease. Nor can we bring within our mental grasp a picture of the extraordinary total of suffering, sorrow, poverty, immorality, and financial loss caused by this needless sickness and premature death—but it is constantly going on, nevertheless.

## THE STATE AND PHILANTHROPY.

Americans are extremely generous in relieving distress from acute causes such as accidents, floods, earthquakes, epidemics and wars. And, if these 400,000 funerals with their millions of mourners occurred at one time, and could be visualized and pictured and described in the newspapers, money to combat this enemy would be forthcoming in abundance.

But with all our fabulous riches, with all our wealth of scientific knowledge, with all the noble and charitable impulses of our people which prompt them to shower millions upon the unfortunate *after* trouble comes, we permit this enemy to ravish the nation unchecked.

Go to the philanthropist or the State and ask for advice in fighting organic disease, and in effect the answer will be:

"We can do nothing for you. Wait until you are sick, then we will take care of you. We are maintaining hospitals for this purpose. We will even bury you, and send your children to an orphan asylum. We are very charitable, but will guard you against illiteracy, accidents and communicable disease only. Organic disease is an act of God."

## SOME FUNDAMENTALS.

For the consideration of those who are not in accord with the idea that the public health service should engage in this educational work, let us refer to a few fundamentals.

It is axiomatic that the primary purpose of organized society is to protect the lives of those who compose it. Hence, if it is a proper function of the State to protect a citizen from germ diseases, why not from degenerative diseases? If it is right to spend public money to guard against disease that may spread and injure the health of the community, why is it not right to guard against disease that is reducing the vitality of the nation?

The State now denies the citizen the privilege of killing his neighbor through ignorance or neglect of health precautions, but concedes him the privilege of killing himself by the very same method. In other words, the State goes to a great deal of expense to save a man from one disease to let him die prematurely from another without the slightest help or warning.

Is a life saved from tuberculosis or typhoid fever of any more value to the State and to the family than a life saved from Bright's disease? Is it possible that it is right for the State to teach a citizen how to keep his premises in a hygienic condition, and wrong for it to teach him how to keep his body and its organs in a healthful condition?

There is little to be gained by extending the extreme span of life, but it is of vital importance to our country and to posterity that we at least check the shortening of the active, productive period of life.

Must we back away from this great problem of life-saving and of race protection because it is difficult, and continue to drift along the line of least resistance?



That is not the American way. This new burden has been placed upon us by the development of modern civilization and we must not shrink from it.

If the human wastage from this enemy were stationary or even declining, it would still be the imperative duty of American lawmakers, educators, doctors, health officials and the press to make our people see this picture and to apply relief. How much greater then is the need for action when we consider the extraordinary increase which has occurred in the death rate from these organic diseases?

## THE MENACE OF THE INCREASE.

The increasing waste of American vitality and life from degenerative diseases among wage earners and other classes is rapidly reaching the magnitude of a national menace.

Certain members of the medical profession have for years believed that these diseases were increasing. But whether or not they were increasing out of proportion to the gain in population could only be determined by a thorough, tedious and somewhat expensive search and study and comparison of mortality records. Few have had the time or the inclination to undertake this task. It was done, however, and the result can be summed up in the statement that wherever comparisons can be had to cover a period of ten years or more the records show a marked increase in the mortality from the organic diseases, and, as is well known, a decrease in the mortality from the communicable diseases.

Time forbids any extended reference to statistics or a discussion of their reliability or the methods of arriving at the ratios. We may, however, consider some comparisons in tabloid form which have been worked out from the most reliable mortality data available. These are presented, not to fix in the mind any arbitrary ratio as being mathematically certain, because such exactness is impossible in mortality statistics, but to indicate the trend, and to show how completely the records support the statement that an extraordinary increase has occurred in the mortality resulting from the giving out of the organs.

By combining the mortality from the degenerative diseases, disturbances of the ratios by improvement in diagnosis or classification are obviated for such change would not be apt to take them out of this group. Any advance in completeness or accuracy would be naturally too slight in the short period of ten years to account for the extraordinary increase indicated by the returns.

The U. S. Census records show that during a period of ten years in a group of occupied males numbering over 4,000,000, the increase in the death rate from the degenerative diseases was 52% divided as follows:

	Increase
Laboring and servant class.....	37%
Manufacturing & Mechanical Industries.....	54%
Agricultural, transportation & other outdoor workers....	66%

During the last census interval, 1900-1910, the death rate among the general population from organic heart and circulatory, kidneys and apoplexy increased in eight registration states and cities as follows:

	Increase		Increase
Maine .....	28%	Chicago .....	45%
Massachusetts .....	20%	Cleveland .....	37%
Connecticut .....	23%	Milwaukee .....	30%
New Hampshire .....	30%	Philadelphia .....	20%
New York.....	19%	Cincinnati .....	43%
New Jersey .....	17%	New Orleans .....	24%
Michigan .....	38%	Pittsburgh .....	53%
Vermont .....	35%	St. Louis .....	30%

These increases range all the way from 17% to 38% in the states and from 20% to 53% in the cities in the short period of ten years. They are confined to no particular section, race or condition.

In twenty years, 1890-1910, it increased in the registration area 41%, divided as follows:

	Increase
Heart and circulatory.....	46%
Kidneys and urinary.....	50%
Apoplexy and nervous system.....	32%

The increase in thirty years, 1880-1910, in the death rate from the heart, kidneys and apoplexy in sixteen American cities,

in New Jersey and Massachusetts (with paralysis, liver and circulatory diseases added in the latter) was as follows:

	Increase
Sixteen cities .....	94%
New Jersey .....	108%
Massachusetts .....	86%

It is a significant fact that the mortality from these diseases in England and Wales, Sweden and other hygienically advanced nations has been either stationary or declined during these three decades.

### OTHER EVIDENCE.

In the general population in New York City, Dr. Guilfooy's comparison of a thirty-year period shows a marked decline in the expectancy of life commencing with the group age 40-50.

Another interesting bit of evidence is found in the record of rejections of applicants for life insurance by a large American company. Out of 20,336 rejections, 8,782 or 43% were declined for physical impairments indicating the presence or the coming of these same degenerative diseases. This is especially significant in view of the fact that fully 90% of these 8,782 people were unaware of their condition and under the impression that they were physically sound.

The careful, and I might say, searching physical examination of a large number of individuals during the past year by the Life Extension Institute fully sustains the verdict of the general mortality records as to degenerative tendencies. Our investigations have given new emphasis to the fact that the foundations of degenerative diseases are laid by a vast number of people in the early years of their lives, and that these conditions are discoverable long before the individual knows of their existence.

As related to this subject of physical degeneration, we might discuss among other signs the declining birth rate, the increase in insanity and mental defectives, the increasing consumption of alcohol and habit-forming drugs, the diseases of vice and the extraordinary high suicide and homicide rate in our country, but all this is another story.

### TO SUM UP.

To sum up, the best available evidence shows that American life waste from the degenerative diseases is excessive; that it

is increasing rapidly, both in city and in rural population, and among the native and foreign born elements; that it is increasing in the younger age groups, but in greater ratio in middle life and old age; that this increased mortality has caused an increase in the general death rate commencing with age group 40-50, and that these increases do not occur in kindred nations in Europe. In short, American vitality appears to be declining. In view of this evidence may we not well consider these questions:

Warships, guns, forts and munitions for national defense are now subjects of serious public concern, and properly so. But is it not time to give thought to the physical efficiency of the men who are to handle these defensive weapons now and in the future?

How much longer may we hope successfully to meet the struggles of peace and war with the proportion of inactive, flabby-muscled, low-powered Americans constantly increasing?

How long can the nation endure with the physical fitness of its producers and defenders steadily declining?

This adverse trend is not only very marked but the death rate from organic disease is very high. The life waste from this cause is excessive.

## THE CAUSE.

However opinions may differ as to the cause or causes of these conditions, we now know that we cannot brush this problem aside by assuming that the statistics are valueless, or that the saving of life from infancy to the early adult period from germ diseases has given us an increased number of weakened lives which become easy victims of the chronic diseases in middle life and old age. Undoubtedly, this influence will affect the death rate in the older ages in the course of time, but its present effect must be very slight for the heavy reduction in mortality in early life has occurred almost wholly since we learned of germs and how to fight them, which is within the past three decades. Therefore, very few of these people are old enough to pass into the age group 40-50 and beyond. Again, it should be remembered that, while the same reduction in mortality from the germ diseases has occurred in the European countries, no corresponding increase in the degenerative diseases or in the general death rate in middle life or old age has occurred there.

It is possible that some specific predominating cause will be discovered—perhaps among our numerous microscopic enemies—for the downward tendency of the American vitality curve.

The most common and plausible reason offered for this trend is found, however, in the statement that the changes in living conditions during the past two generations have been so rapid and so extraordinary that we have not yet had time to adjust our lives to them. We know that these changes have been much more radical and abrupt here than in Europe.

It is a matter of common knowledge that the high nervous tension under which Americans work and live is virtually unknown in other countries. There is also significance in the fact that during the past fifty years the proportion of our population which has changed from an outdoor to an indoor life, or from a physically active to a physically inactive life, has enormously increased. This has been caused by the marvelous gain in our wealth, in time-saving and labor-saving devices and in cheap transportation. With all this has also come a change in the nature and richness of our food.

There are millions of Americans who are living physically unbalanced lives as a result of these changes, to whose aid preventive medicine must come.

But aside from the cause of the increase in this life waste, the vital fact before us is that we now actually know of the habits of life which place excessive strain upon the heart, arteries and kidneys and cause them to wear out too soon.

### **STIMULATING INTEREST.**

And knowing this, is it not our imperative duty to bring this knowledge to the individual and to use our utmost endeavors to induce him to change these habits which are reducing physical efficiency and shortening the active, useful years of life? This being a national problem, the duty of leading in this great educational movement rests with the men of the public health service—local, state and national—who have been entrusted with national health defense.

The health service has already had marked success in spreading knowledge of individual and household hygiene as related to communicable disease. Think of the impetus that would be



given this broader movement to include organic disease, if every health official in the country were doing his part to stimulate and educate the public upon this subject. We know that this can be done if we develop a little crusading spirit, and set about it.

The reason I feel so positive that this can be done is because of my own experience in helping to arouse interest in the increase of organic disease. A brief account of this experience may be of value for the encouragement of recruits to this health and life saving cause, and it is therefore given with the hope that the personal reference may be pardoned.

This apparent increase in the degenerative diseases first came to my notice several years ago through my present colleague, Dr. Eugene L. Fisk. He was then medical director of the life insurance company of which I was President, and had already become interested in the subject. The importance of this increasing menace to national vitality impressed me deeply and I determined to enlist permanently in the work of helping to secure public recognition of the seriousness of the problem.

At that time this adverse trend was quite generally ignored. So far as could be learned no effort was being made to impress the professional world and the public with its significance and the urgent need for remedial action.

We searched and interpreted the records. The results were given to the public through the press and by other methods. This work has since been very much broadened. Gradually help began to come. Slowly but surely professional writers and leaders in the general field of prophylaxis began publicly to discuss the subject in some of its phases. And now, thanks to this growing interest and help, the importance of the increase of degenerative diseases is in a fair way to be generally recognized as a problem meriting national concern.

In 1909 we established in the same company the first health bureau in a life insurance company for the purpose of giving free medical examinations and hygienic knowledge to policyholders, and with most gratifying results in the mortality rate of the group taking the service. At the same time the Metropolitan Life Insurance Company engaged on a large scale in another phase of health conservation, and has since included free examinations to a portion of its policyholders.

For three years, while I was associated with one of the large life companies, the campaign was continued, and the subject urged upon the attention of a large constituency through a company publication. While this period was too short to justify the claim that any marked impression was made on the mortality of the group, it is comforting to know that the mortality of this company has dropped materially during the past two years. This company is also offering free health examinations to a portion of its policyholders.

While insurance companies move slowly in such matters, their general concern in health conservation has increased, and a number of them, perhaps eight or ten, are now giving free medical examinations to certain groups of policyholders, and others are occasionally issuing educational literature.

Out of the growth of interest in this general subject developed the sentiment that found concrete expression in the organization of the Life Extension Institute. This was done not by the insurance companies as many suppose, but by Mr. Harold A. Ley and his friends, with the enthusiastic and effective support of Professor Irving Fisher who was a prominent and an early pioneer in this movement and also of former President W. H. Taft.

It is important that the growth of this campaign to stimulate interest should be known, that those who wish to help may not be deterred by the scepticism of the same type of friends who assured us several years ago that such efforts would be fruitless.

### **HELP FROM THE HEALTH SERVICE.**

Now, if this much can be accomplished by the comparatively small group of people engaged in this educational campaign during the past few years, what may we not hope to accomplish during the coming five years if the public health service—local, state and national—throughout the country joins in the good work?

We know that a few health officers are already moving in this direction. The New York State Health Department has taken up this educational problem and a part of the state traveling exhibit is devoted to degenerative diseases. The New York City Department has examined a number of city employes and

is urging the public to adopt the habit of health examinations. It has also taken up organic disease. It would repay anyone to read the papers of Doctors Shipley and Emerson of that department upon this subject.

Recently the United States Public Health Service issued a valuable educational pamphlet by Dr. F. E. Smith on exercise and health in which attention is called to the lowered expectancy of life above age 40 and to the need of combating the increasing diseases of degeneration.

There are doubtless other departments working in this field of which I am not informed. I know that Dr. Rankin of North Carolina, Dr. Woodward of Washington, D. C., Dr. Hurty of Indiana, and a number of other health officers are deeply interested. I regret I cannot recall the names of each of them. The records of this Association also show an increasing concern in this problem.

Nor must we overlook the increasing number of medical men and laymen, outside the health service, who are now giving attention to this subject.

The wonderful achievements of the public health service in combating communicable disease has compelled public confidence. The average health officer has more influence with the public than he imagines, if he will but exercise it. We have had an illustration of this at this convention:

The Governor of New York said here two nights since: "I have good hope, now that the problem is clearly recognized, that your efforts to induce the public to observe the rules of personal hygiene and to undergo a periodic medical examination for the detection of these diseases at a curable stage will bear fruit in the near future. I shall personally make every effort to follow the rules of moderation in all things." And Secretary Redfield of the President's Cabinet said last night: "I take it that preventive medicine has it within its power to reduce our annual death roll by half a million, and that if it had the funds and the authority it could within a few brief years at most produce this wonderful result. If I am correctly informed we know what is to be done and how to do it and we have the organization through which the saving of pain and of



loss can be effected. We lack as yet the vision out of which must come the impulse to do."

It is through public health officials that these prominent leaders have become interested in public health.

Any health official or physician who does not now know the modern rules of individual hygiene can inform himself with a reasonable amount of reading. He can soon learn of the habits of eating, drinking, working, resting, playing, that injure the organs and of those that tend to conserve them. If he will keep these rules before the public, as much as possible, he cannot help but make an impression upon the minds and lives of many people.

### THINGS TO DO.

For instance, by persistently urging the formation of "hiking" or walking clubs to enable people in sedentary occupations to get natural outdoor exercise at least once a week, "hiking" clubs will soon become the vogue in that community—as I understand they now are in some towns. Why not officially encourage this outdoor habit?

Every health officer knows there should be a course in personal hygiene taught in both the elementary and the higher grades in public schools. Why not advocate this?

Every health officer knows that the public should study and observe the common laws of individual hygiene. He also knows that every citizen should go to his doctor periodically for health examination as a simple, sane preventive measure. Why then should every health officer not make it his permanent policy to urge the people by bulletins, press articles, lectures, etc., to adopt these very sensible health and life-saving habits? Why not try it? Are not these endangered lives worth the effort?

Aid can be secured in this new educational work by interesting private physicians, medical societies, civic bodies, social organizations, religious organizations, colleges, public school officials, insurance agents' associations, fraternal insurance orders, charitable and relief societies, moving picture theatres, public service corporations, other employers of men and women and newspapers and magazines.

Some of these agencies will help distribute hygienic literature, some of them will assist in securing audiences and even lecturers, and to promote exhibits, health day exercises, etc. In fact, if

the health officer will but lead, if he will lay out an educational campaign for the year, and earnestly and patiently push it, he will open up a splendid new field of usefulness and with little cost to the public.

In the work of the Institute, we are constantly sending many people to their doctors, their dentists, their oculists. Therefore, we know from experience, as well as from the history of recent years, that the people will heed hygienic advice. They will learn, but they will not educate themselves; they must be taught. And they must depend largely upon the medical profession and the public health service to lead them from the ignorance and folly which is now costing so many precious lives and threatening the vitality of the nation.

### CONCLUSION.

To quote a few lines recently from the pen of Professor Irving Fisher: "A great health movement is sweeping over the entire world. Hygiene has repudiated the outworn doctrine that mortality is fatality and must exact year after year a fixed and inevitable sacrifice. It aims instead to set free human life by applying modern science. A science which has revolutionized every other field of human endeavor is at last revolutionizing the field of health conservation \* \* \*.

"Thoroughly carried out, individual hygiene implies symmetry and beauty; it enormously increases our capacity to work, to be happy, and to be useful; it develops, not only the body, but the mind and the heart; it ennobles the man as a whole."

In conclusion, let us paraphrase the famous civic oath of the Athenian youth, and make it refer to health, instead of the city, and let us hope that the time will come when this sentiment is displayed and observed in every school and home in the land:

We will fight for the ideals and sacred blessings of health, both alone and with many; we will revere and obey the hygienic laws and do our best to incite a like respect and reverence in those above us who are prone to annul or to set them at naught; we will strive unceasingly to quicken the public sense of hygienic duty. Thus, in all these ways, we will transmit this human body not less, but greater, better and more beautiful than it was transmitted to us.

## THE INSTITUTE.

This Institute is dedicated to the work of human salvage. It is counseled by a Hygiene Reference Board of 100 eminent authorities and students in the various fields of health and life conservation. The Chairman of this board is Prof. Irving Fisher of Yale; Hon. Wm. H. Taft is Chairman of the board of Directors, Gen. Wm. C. Gorgas is Consultant in Sanitation. It was established by a group of scientists, publicists and business men, who desired to provide a self-supporting central institute of national scope, devoted to the science of disease prevention—a responsible and authoritative source from which the public might draw knowledge and inspiration in the great war of civilization against needless sickness and premature death. Literature descriptive of its organization and purpose supplied on application.

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